Los Alamos National Laboratory 1997 Quality Status

October 1997 Report

Brian Thompson

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About This Report What We Have Learned page 3 page 23 Presents the insights gained about the things we are An Open Letter on LANL Quality page 4 doing well and the things we need to improve—both within Baldrige categories and as cross-cutting issues as revealed by the feedback reports from four assessments. 1 **Supporting LANL's Goals and Priorities Next Steps** page 7 4 page 78 Offers recommendations for involvement and support in Reviews LANL's quality goals and business priorities 1998 and beyond to hold the gains and accelerate LANL's and explains the role of Baldrige-based assessment plans rate of improvement. in meeting them. Acknowledgments page 93 Where LANL Stands 2 page 17 **Appendix A: A History of Quality at** Assesses the current status of LANL quality relative to LANL page 94 the Malcolm Baldrige National Quality Award criteria, based on scores and findings from 1994, 1995, 1996, **Appendix B: Recent Awards** and 1997 evaluations. **Earned page 102**

About This Report

The Charter

On February 14, 1994, the Laboratory Leadership Council (LLC) adopted the Malcolm Baldrige National Quality Award criteria as a framework for the Laboratory's journey towards its vision of a customer-focused, unified laboratory where science serves society. The use of the Baldrige criteria was designed to allow integration, prioritization, measurement, and feedback of Laboratory efforts while deterring random activity. The Baldrige criteria, the US industry standard, have been widely adopted by government and educational institutions and afford both flexibility and the ability to benchmark against other organizations. The Baldrige scoring system allows LANL to numerically assess itself or have others assess the Laboratory to give a macromeasure of progress. The Laboratory's Quality and Planning Office was designated to serve an integration and implementation function.

Background

In April 1994 the Laboratory conducted its first Baldrige-based self-assessment. In 1995, 1996, and 1997 the

Laboratory linked this self-assessment process to the DOE Quality Awards Program, gathering external feedback from both Program examiners and independently selected consultants. In October 1996 the Office of Quality and Planning distributed LA-UR-96-4043, an analysis of issues identified during the first three assessments. This document builds on the preceding report and incorporates findings from the 1997 assessment.

An Open Letter on LANL Quality

Introduction

It has been over three and a half years since the LLC adopted the Baldrige criteria as a framework for the Laboratory's journey toward its quality vision and even longer since former Laboratory Director Sig Hecker set the goal of making LANL the best-managed laboratory in the DOE Complex. The Office of Quality and Planning was created to accelerate the Laboratory's quality efforts and was specifically charged with implementing the Baldrige assessment process. This report builds on last year's summary, LA-UR-96-4043, and details both our past efforts and our current status.

We Are Making Steady Progress

The 1994 Baldrige baseline self-assessment gave us a good starting point for many of our current quality improvement efforts. Conducting subsequent annual evaluations against the Baldrige criteria—in 1995, 1996, and 1997—has allowed us to judge where we have continuing areas for improvement and where we are making progress. There are reasons to be encouraged.

• We are gaining self-knowledge. The four assessments have given us a much clearer picture of the Laboratory and a better

perspective on how the Laboratory's processes and initiatives are interwoven and deployed. We have a clearer idea of who we are in terms of programs and mission; we know where we are going and what our priorities are. Repeated Employee Perspective/Checkpoint Surveys show an increasing awareness that "Reducing the Nuclear Danger" is the clear focus of everything we do here. We also better understand who our customers are. Program directors understand what those customers want and know how well customers think we are performing in relation to our competitors. We can also more sharply define our areas for improvement.

- We are beginning to think systematically. Using the Baldrige assessment process allows us, in many cases, to see more clearly some of the linkages and connections between components of our work. We have begun to identify the unified systems within which all of us operate but which still allow us to develop unique initiatives for specific sets of customers and stakeholders. Bringing focus to our institutional planning is another key improvement. Almost every division and program office now has integrated goals and plans that mesh with the overall goals and plans for running the Laboratory. Quality improvement teams are beginning to be cross-functional in nature to ensure that selected solutions are optimal for all affected organizations.
- We are improving our way of doing business. Most significantly, we are beginning to manage our operations by fact

An Open Letter on LANL Quality (cont)

rather than by anecdote. Although we are in the early stages of understanding how to evaluate our operational effectiveness, the increasing use of measures is showing us new ways to improve performance. We have measures for our tactical goals, have improved our ability to use Appendix F metrics, and have developed improved measures for many of our key activities.

Our Rate of Improvement Is About What We Had Hoped For

Our Baldrige score has risen steadily if not dramatically for the past three years, an indication that we are on the right track. Although the evaluations show we still have room for major improvement, they do indicate that we have developed sound, systematic approaches for many of our activities and are beginning to deploy them. We are also beginning to see positive results, which typically take longer to validate and trend. In 1994 we had set an informal goal of having in place by the year 2000 practices that would allow us to attain a score against the Baldrige criteria comparable to that earned by Baldrige Award winning organizations. Our four evaluations indicate that we are on track to reach that goal if we maintain our current rate of improvement.

There Is Still Significant Room for Improvement

We have reason to be encouraged. Interest, commitment, and understanding have grown. However, we will not see the strategic benefit of all this encouraging activity until we systematically align all that we do at every level of the Laboratory—our customer focus, values, behaviors, processes, measurements, information systems, and daily work. In some ways the progress we have made so far has been easy because we had such great room for improvement. What we do in coming years will truly require dedication, effort, and constancy of purpose. The following specific areas—presented in more detail in Section 4—are those in which we need to strengthen efforts under way or develop new initiatives.

- Leadership system. The appointment of a new Laboratory Director and resulting changes in senior management structure and style will have significant impact on this area. Throughout the transition and beyond, we must clarify and clearly communicate the leadership structure and decision-making authority of the Laboratory. Senior leaders must continue to be highly visible in communicating and reinforcing Laboratory goals and values.
- Strategic planning and operating systems. Although we have improved our planning process, we must continue to closely

An Open Letter on LANL Quality (cont)

monitor the tactical goals and related measures and ensure that division plans fully reflect higher-level institutional goals. Two other key operational processes, our Voice of the Customer process and our Program Development/Project Execution process, must be more systematic, controlled, and evaluated. Although we are attempting to improve these processes, we still have much work to do.

- Information and analysis. This is a recurring improvement area. We must find ways to identify key management information; more effectively integrate that information; and provide timely, effective analysis. We must structure our data to support uniform and systematic management processes and improvement efforts. In short, we must begin to more effectively use data to manage our business.
- Results. In addition to developing and using measures more effectively, we must better align our measures with our goals. We must systematically identify best-in-class or world-class goals and then ensure that the measures we track and the results we trend move us in the right direction.

Closing

We still have a great deal of work ahead of us, but we have made a great deal of significant progress. If we continue to believe that the word quality is more than management jargon or the "methodology of the day," we can begin to understand that the term really means caring about the future and finding the right tools to solve problems and develop a healthy Laboratory. Our continued progress must be based on organizational efficiency, on the use of institutional measures to manage the way we work and do business, and on individual commitment to continuous improvement. All of us as Laboratory employees must understand who our customers are, what they want, and how well we are doing in delivering what is required. We must understand how to measure our own and our group's productivity, how to evaluate our performance against others who may be doing better, and how to adapt other practices to make ourselves more effective. And—while we continually strive to improve—we also need to celebrate our accomplishments more.

> Rich Bastian Program Director, Quality & Planning

About This Section

Total quality management helps an organization focus on satisfying customers and improving continuously. The ultimate goal is to enable the organization to efficiently and effectively deliver a high-quality product. This section of the report shows the connection between that goal and the Malcolm Baldrige National Quality Award criteria. This section covers

- where the Laboratory wants to go: LANL's goals and priorities, and
- how Baldrige self-assessment can help the Laboratory reach its goals.

LANL has integrated quality into its strategies and goals

Strategies

Tell the Laboratory how to achieve its vision and mission

Guiding Principles

Help the Laboratory implement programs and operations to provide products and services to customers

Tactical Goals

Provide a framework for making short-term decisions

LANL has integrated quality into its strategies and goals

Perspective

The Baldrige criteria emphasize that successful organizations must effectively translate both customer and operational requirements into goals and strategies. An organization's understanding of quality principles is evident by

- understanding of customer needs,
- integration of such goals as customer satisfaction and customer retention,
- drive for productivity growth, and
- focus on building operational capability—including speed, responsiveness, and flexibility.

LANL's quality efforts are an attempt to translate these requirements into strategies, principles, and goals that help the organization focus internally on how it provides products/services and externally on how it meets customer needs. Strategies explain how the organization hopes to position itself within its market arena; business principles are those guidelines dictating how the organization wants to carry out interactions with customers, suppliers, and stakeholders; and tactical goals are the detailed description of what the organization hopes to accomplish in the short term through its business actions.

Strategies

LANL has developed six strategies for achieving its vision and mission:

- Maintain a strong, innovative defense core with a nuclear focus.
- Emphasize science and strengthen our core technical competencies within the defense core, teaming with universities as appropriate.
- Use the science and technology base to support both civilian and conventional-defense programs that are critical to retaining the multiprogram nature of the Laboratory in areas that strengthen core competencies.
- While becoming more customer focused, continue to balance program (market) pull with technology push.
- Manage business and operations at a world-class level.
- Partner with industry where appropriate.

Guiding Principles

LANL uses eight guiding principles to implement programs and operations in support of our strategies and in providing products and services to customers. These principles are

LANL has integrated quality into its strategies and goals (cont)

essential to conducting business. The Laboratory's commitment to these principles guides its actions with customers, stakeholders, workforce, and neighbors.

- We are motivated to serve our nation and the people of the world.
- We encourage people-oriented risk-taking at all levels.
- Our quality lies in the diversity of our science, our people, our programs, and our facilities.
- We have pride in who we are and what we do.
- We are open to our employees, to the community, to each other, and to change. We encourage open minds.
- We include the interests of others in our decisions and foster trustworthiness in what we do and what we say.
- We measure our performance continuously.
- We hold ourselves accountable for what we do and hold others accountable for their actions.

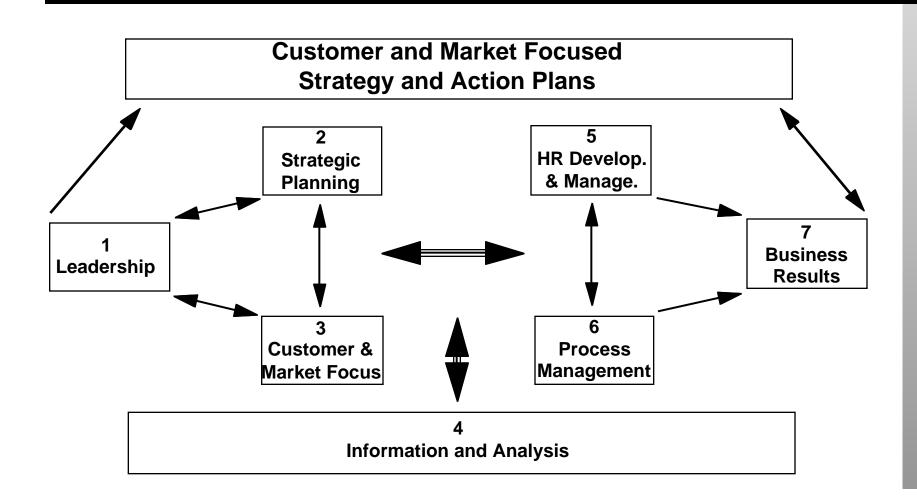
Tactical Goals

The Laboratory's tactical plan provides a framework for making short-term decisions and directing progress toward specific goals. We derived FY96—FY98 tactical goals from Voice of the Customer input, which identified key themes.

In addition, the goals have management champions and are more objective because each has identified measures. The goals include the following:

- Safety First!
- Productivity and Strategic Business Development
- Embrace Diversity
- Corporate Citizenship
- Science-Based Stockpile Stewardship and Management
- The Neutron Laboratory
- The Plutonium Future
- Reducing the Threat of Nuclear, Biological, and Chemical Proliferation and Terrorism
- Integrated Environmental Science
- Modeling, Simulation, and High-Performance Computing
- The Genome and Beyond

LANL has an approach to help us reach our goals



LANL has an approach to help us reach our goals

Baldrige Overview

The Malcolm Baldrige National Quality Award criteria promote an understanding of the requirements for customer focus and performance excellence. They focus on issues and areas that all businesses—including R&D institutions—need to thoroughly understand. The criteria help the Laboratory to ask the right questions, perceive the dynamic relationships, and develop a systematic approach across the entire institution to achieve a "customer-focused, unified Laboratory where science serves society."

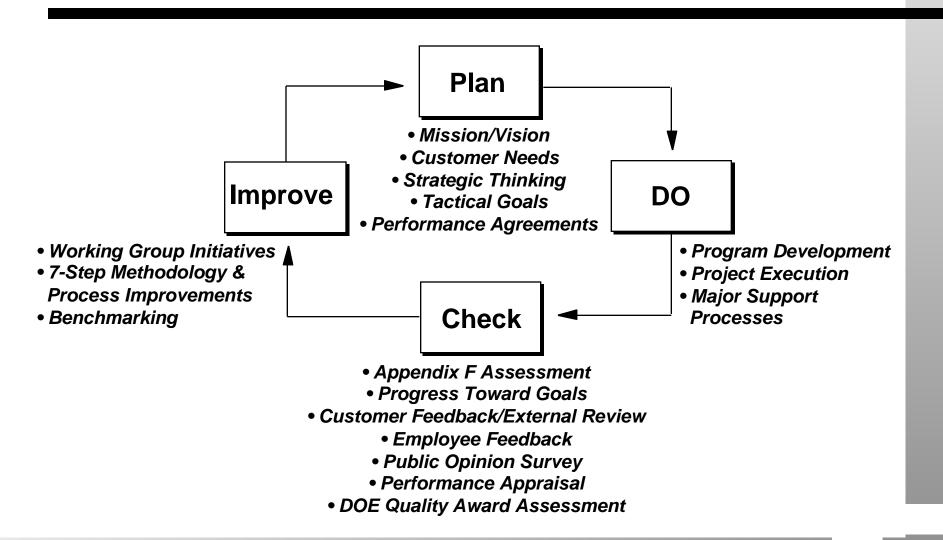
Each year the administrators of the Malcolm Baldrige National Quality Award send out tens of thousands of application forms. They receive only about 100 completed applications back. One assumption is that many organizations across the country are using the criteria for self-evaluation and improvement but that only the very best companies—those with a reasonable chance of winning the award—actually apply. Thus, comparing LANL against Baldrige winners and using the Baldrige criteria really will point the Laboratory toward world-class status.

Baldrige Characteristics

The Malcolm Baldrige National Quality Award criteria

- are nonprescriptive,
- focus on results,
- emphasize learning,
- are easily diagnosed,
- · serve as an industry standard, and
- have been adapted for use in government.

LANL uses an annual cycle for continuous improvement



LANL uses an annual cycle for continuous improvement

Using the Self-Assessment Process

In 1994 the LLC adopted the Baldrige criteria to serve as an overarching diagnostic framework to check on the status of LANL quality efforts. Combining both DOE and independent evaluation, the 1995-1997 assessments have provided an all-inclusive check on approach, deployment, and results of all our actions.

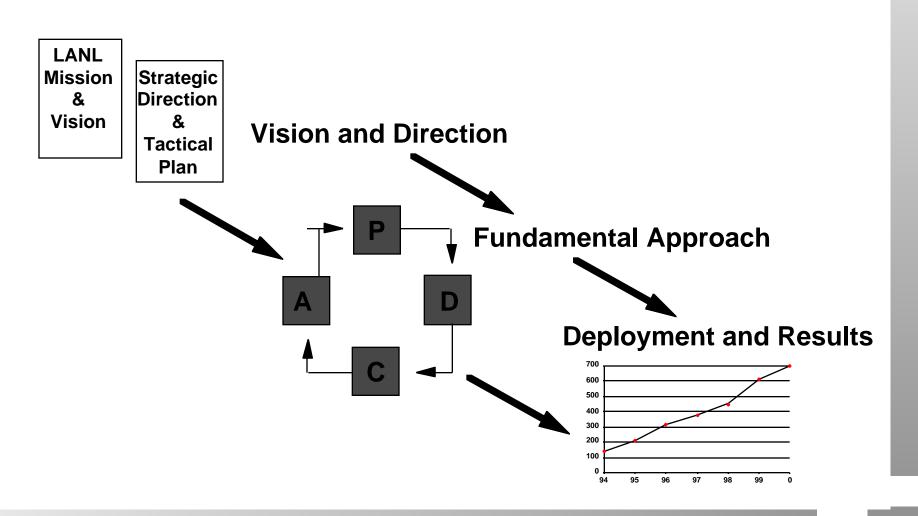
The PDCA Cycle

LANL is committed to continuous quality improvement in all activities. The PDCA cycle helps insure a systematic approach to our improvement efforts.

 Plan: Within the framework of the Laboratory's mission/ vision and strategic direction, the LLC uses the analysis of feedback from the previous year's Baldrige assessment process—combined with customer input, progress toward current tactical goals, and employee feedback—to develop specific tactical goals for the near term. Division and program offices may also use the feedback to develop their own specific improvement efforts.

- *Do:* The LLC charters continuous improvement teams to design and carry out cross-functional or institutional improvements. Division and program offices do the same for their specific improvement plans.
- Check: With senior management input, a cross-functional Laboratorywide team collects data and documents the state of the Laboratory. The team notes the status of initiatives and business results and prepares an assessment document that describes Laboratory activities in terms of Baldrige criteria.
- Act: The Quality and Planning Office and LANL
 management analyze feedback from both evaluators and
 customers to identify those areas where improvement or
 re-engineering efforts will yield the greatest results or
 where single initiatives may produce results in many
 areas.

LANL is moving from approach to deployment and results



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LANL is moving from approach to deployment and results

Deployment and Results

The LANL approach to quality offers a consistent strategy for applying quality principles to the management of activities. The Laboratory does an excellent job of developing approaches to problems, but approaches alone would leave LANL far short of the success it seeks. Results depend on the systematic deployment and implementation of approaches at every level of the Laboratory to all the Laboratory does.

Where the Baldrige criteria evaluate approaches, LANL frequently scores well because the Laboratory has a well reasoned method for attacking quality problems. Deployment is often less systematic, however, because the discipline to implement solutions across the entire Laboratory is sometimes lacking.

LANL is making some progress toward effectively applying those approaches to achieve consistent results. Although translating customer expectations into product and service characteristics, managing and improving process through disciplined measurement and analysis, and empowering employees to manage their own work to meet customer requirements are daunting tasks, results directly linked to approach and deployment are beginning to emerge.

Establishing a quality culture through use of the Baldrige framework establishes the proper atmosphere without mandating specific tools and methods. As divisions build their own quality systems—in harmony with overall Laboratory strategy—they identify the tools and techniques most appropriate for their environment.

LANL's commitment to quality includes an affirmation to check regularly where we stand (e.g., through Baldrige-based evaluations, assessments against our contractual requirements with UC and DOE, and other audit and assessment activities), to accept and act on the results of those evaluations, and to provide help and support to the divisions as they translate quality approaches into systematically and uniformly world-class business results.

About This Section

Senior managers set a goal to make LANL the best managed Laboratory in the DOE Complex. Progress is measured against the Malcolm Baldrige National Quality Award criteria.

The Baldrige criteria are comprehensive, nonprescriptive, and applicable to diverse operations—including complex R&D institutions. The Baldrige process continues to improve each year, setting the standard for world-class quality. For example, the 1997 criteria revision placed an increased emphasis on organizational results. Organizations that undertake Baldrige-based assessments measure themselves against exacting evaluation criteria.

LANL uses the results of the assessments—evaluations by trained examiners who assessed Laboratory systems against the Baldrige standards—to estimate the status of LANL quality and to identify relative strengths and weaknesses.

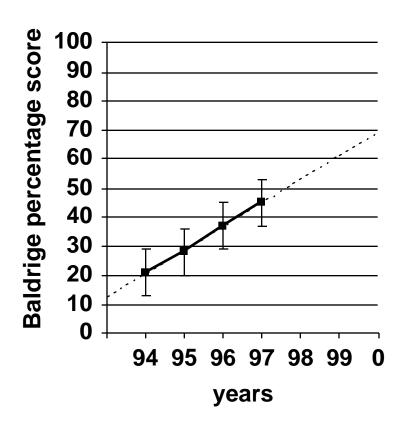
Section 2 of this report explains where the Laboratory stands after four evaluations and three years' worth of improvement efforts:

- LANL is making steady progress.
- The rate of improvement is about what was hoped for.
- Improvement initiatives begun several years ago are beginning to show results.
- Evaluation results have been frequently and independently validated.
- There is still significant room for improvement.

Baldrige scores are steadily improving

- LANL is making steady progress
- LANL currently appears to be on track to reach its goal by the year 2000
- Early improvements are the result of quickly and relatively easily implemented approaches. Future gains depend on systematic deployment and results
- There is still significant room for improvement

Total Scores & Trend Line



Baldrige scoring guidelines indicate LANL's progress

Score	Characteristics
0%	 no systematic approach; anecdotal information no results or poor results
10% - 30%	 beginnings of systematic approachs early stages of a transition from reacting to problems to a general improvement orientation major gaps in deployment of strategies results not reported for many areas of importance; early stages of developing trends; some improvements and early good performance levels
40% - 60%	 sound, systematic approaches a fact-based improvement process in place; more emphasis on improvement than reaction to problems no major gaps in deployment of strategies improvement trends and good performance levels; no poor trends or performance levels in areas of key importance; good results relative to comparisons and benchmarks

Baldrige scoring guidelines indicate LANL's progress

The Baldrige Scoring System

Scoring against the Baldrige criteria involves evaluation based on three dimensions: approach, deployment, and results. Approach refers to the methods an organization uses to accomplish its goals. Deployment refers to the extent to which an organization applies its approaches. And results refers to the outcomes of an organization's efforts.

LANL's Progress

Baldrige scores are reported in 10% segments called scoring bands. Except for the extremes (i.e., 0% and 100%), scoring bands are grouped into ranges that span 30%. The Laboratory's first evaluation placed LANL in the lower or middle band of the 10% - 30% scoring range. Since then LANL has made steady progress, and this year's evaluation places the Laboratory in the lower scoring band of the next higher range, 40% - 60%. The descriptions of the scoring ranges used in the Baldrige process show how significant the progression is from range to range.

Baldrige scoring guidelines reflect LANL's goal

Score	Characteristics
40% - 60%	 sound, systematic approaches a fact-based improvement process in place; more emphasis on improvement than reaction to problems no major gaps in deployment of strategies improvement trends and good performance levels; no poor trends or performance levels in areas of key importance; good results relative to comparisons and benchmarks
70% - 90%	 sound, systematic approaches a fact-based improvement process is a key management tool; clear evidence of refinement and improved integration as a result of improvement cycles approaches are well deployed with no major gaps good to excellent performance; sustained improvement levels and trends; many to most results relative to comparisons and benchmarks show leadership and very good performance levels

Baldrige scoring guidelines reflect LANL's goal

World-Class Scoring Range

A Baldrige score of 100% is perfection and is simply identified to serve as the ultimate measure of performance. Actual scores are not announced, but winners of the Malcolm Baldrige National Quality Award typically score in the 70% scoring band.

LANL's Goal

In 1993 former Laboratory Director Sig Hecker set the goal of making LANL the best-managed laboratory in the DOE Complex. Implicit in that goal and the subsequent adoption of the Baldrige criteria as an operation framework is LANL's commitment to develop world-class performance. Thus, the Laboratory's ultimate goal is to earn an overall evaluation at or above the 70% scoring band.

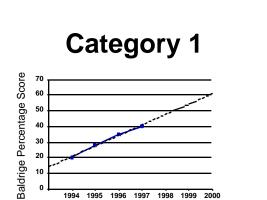
About This Section

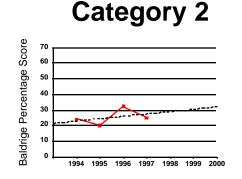
This section of the report analyzes what the Laboratory has learned from assessments that can help improve its quality. In this section, the feedback is organized around the basic Baldrige criteria categories because they provide the basic elements of how LANL operates. The feedback can identify areas that are doing well and where the Laboratory needs to improve as it applies quality principles and practices to the management of the business.

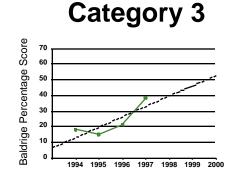
This section explains what the Laboratory has learned about

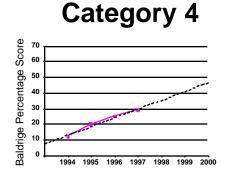
- · leadership,
- strategic planning,
- customer and market focus,
- information and analysis,
- human resources development and management,
- process management, and
- business results.

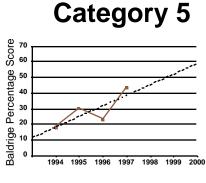
1994-1997 Trends in Baldrige Category Scores

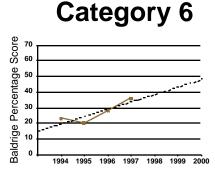


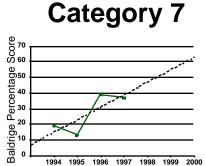












Years

1994-1997 Initiatives in Category 1: Leadership

Priority Area	Initiative	Current Status
Setting clear direction by Laboratory leadership	• Strategic Planning/ Thinking Process	Strategic Overview 1996- 2015 published in 1996
	• Tactical Goals Process	Tactical Goals established for FY95 and FY96-98
	Guiding Principles	Established in 1996
Improving management communication and dialog with the workforce, including clearly communicating and reinforcing Laboratory direction	• Employee Survey • FY94 Tactical Goal 9 (communication)	Conducted in '94, '95, '96, '97 Development of division- level communication plans; improvement in employee understanding of tactical plan from 37% (1994) to 62% (1997)
	All managers meetings	Begun in FY95; held monthly

1994-1997 Initiatives in Category 1: Leadership (cont)

Priority Area	Initiative	Current Status
Having leaders become more personally involved in quality	•Accountability Scorecard for managers	Used for '95 and '96 appraisals; in use for 1997
	•LLC peer review and upward appraisals	Used for '95 and '96 appraisals; in use for 1997
Having Laboratory leadership function more	Streamlined decision- making	Executive Team formed in 1995
effectively		LLC Issues Resolution Process developed in 1996
		Seven-step problem-solving process and implementation checklist adopted by RWG in 1997
Tying individual performance and rewards to institutional goals and	•Performance Management Program (including 360° appraisals)	Piloted & revised in '94, '95; 30% implementation in 1996; 60% implementation in 1997
performance	•Code of Conduct	Adopted by LLC in 1994; critical behaviors included in Performance Management

1994-1997 Initiatives in Category 1: Leadership (cont)

Priority Area	Initiative	Current Status
Integrating efforts to establish mutually beneficial	• Integrated Standards Based Management	Implemented in 1996; continued deployement in 1997
relationships with our neighbors based on openness, respect, and trust	Coordinated community outreach	Refocused Community Involvement and Outreach Office established 1995
	• FY96-98 Tactical Goal 4 (regional involvement)	Tribal cooperative agreements set in 1994
		Outreach centers established in '95 and '96
		Director for Institutional Development hired in 1996
		LANL Foundation established in 1997
		Regional Procurement Advisory Council set in 1997
		Refocused Technology Commercialization Office established in 1997

Strengths in Leadership Category

LLC provides Laboratory direction

- long-term direction through strategies
- short-term emphasis through goals

LLC evaluates Laboratory performance

- weekly meetings and reviews
- external audits
- employee surveys

LANL evaluates leadership effectiveness

- Accountability Scorecards
- peer review and upward appraisals
- LLC stocktake meetings

Strengths in Leadership Category (cont)

LLC addresses its responsibilities

Integrated Standards Based Management

LANL promotes community outreach/involvement

- Community Involvement and Outreach Office & related activities
- paid time off for some community involvement activities

Strengths in Leadership Category

Setting Laboratory Direction

LANL managers set both long-term and short-term direction for the institution through highly structured planning processes.

Systematic Review

LANL managers use a systematic review process to evaluate Laboratory progress. Periodic reviews are linked to numerous measures (tactical goals and Appendix F) identified as critical success indicators. The LLC also carefully reviews the results of other audits and annually studies the information provided by the Employee Perspective/Checkpoint Survey.

Leadership Effectiveness

LANL senior leaders regularly evaluate the effectiveness of the leadership system through stocktake sessions in which they review LLC processes and actions. In addition, the effectiveness of individual LLC members is evaluated annually through the use of peer review, upward appraisal, and the Accountability Scorecard.

Responsibilities

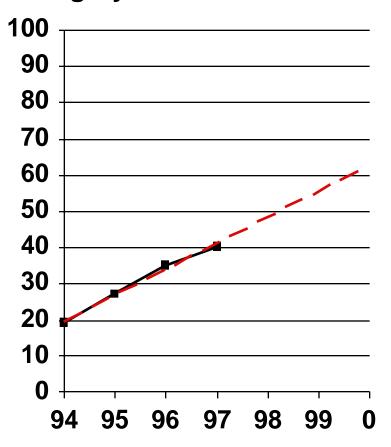
In 1996 LANL instituted Integrated Standards Based Management (ISBM), a change from past compliance-driven approaches, to more effectively provide a safe and secure work environment for employees and the community.

Community Outreach/Involvement

The Community Involvement and Outreach Office, formed in 1995, coordinates a variety of outreach initiatives designed to obtain stakeholder input, involve stakeholders in decisions, and facilitate the exchange of information on LANL facilities, programs, and technologies. LANL also promotes employee participation in the community through paid leaves for some specified volunteer work.

Scores, Trends, and Issues in Leadership Category

Category Score & Trend Line



Recurring Issues

- Lack of Laboratorywide values, business principles, and business objectives (94-97)
- Lack of a coherent, prioritized plan to meet corporate citizenship responsibilities, including targets and measures (95-97)
- Lack of clear leadership structure and decisionmaking authority (96-97)

Areas for Improvement in Leadership Category

Values, Business Principles, and Objectives

LANL has not clearly identified, communicated, and fully deployed Laboratorywide values, business principles, or business objectives. Values define how members of the organization are expected to perform; business principles are those guidelines dictating how the organization wants to carry out interactions with customers, suppliers, and stakeholders; and business objectives are the detailed description of what the organization hopes to accomplish through its business actions. The communication plans developed by each division in 1995 as part of the Laboratory's tactical goals helped spread the word about Laboratory mission and vision but did not address values, business principles, and business objectives.

Plans for Corporate Citizenship

LANL has no clearly articulated plan to proactively address its corporate citizenship responsibilities. Although Laboratory efforts to support science education are outstanding and individual activities to support corporate citizenship are noteworthy, an overall approach and philosophy are missing. Similarly, while LANL has many organizational units in place to address multiple regulations governing the Laboratory, management to ensure coordination and lack of duplication is not evident.

The increased emphasis on corporate citizenship being mandated by DOE and enacted by UC may help address issues related to LANL's role in northern New Mexico. Increased activity by the Operations Working Group to coordinate and oversee regulatory compliance issues may also provide systematic improvement.

Leadership Structure

Specific roles of senior executive leaders (including the Office of the Director, the Executive Team, the working groups, and the LLC as a whole) are still not clearly defined and widely understood. Responsibilities related to planning, performance review, and on-going leadership activities need to be identified.

1994-1997 Initiatives in Category 2: Strategic Planning

Priority Area	Initiative	Current Status
Generating our mission and goals and integrating them into what we do and into the resource allocation process	• Strategic Planning/Thinking Process	Strategic Overview 1996- 2015 published in 1996
	• Tactical Planning Process	Tactical plans established for 1995 and 1996-1998
	• Institutional Plan	Five-year plans prepared annually
	• Linking resources with plans	Institutional Program Development (IPD) and Laboratory Directed Research & Development (LDRD) linked to FY96-98 Tactical Plan
Ensuring that all work links to the Laboratory's mission	• Performance Management Program	Piloted, revised in '94, '95; 30% deployed in 1996; 60% deployed in 1997
	• Accountability Scorecards for senior leaders	Used in '95, '96, '97
	Division Tactical Planning	Deployed in FY96; in FY97, 26 of 27 divisions had plans

1994-1997 Initiatives in Category 2: Strategic Planning (cont)

Priority Area	Initiative	Current Status
Developing a flexible, well trained, resilient workforce	Workforce development	Planning for career development, mentoring, and succession planning begun in 1996
		Skill identification and needs analysis begun in 1997
		Training Integration Office established in 1997
Ensuring that work is planned and executed efficiently	• Workforce Productivity Project	Projected \$60M savings annually starting in 1996; additional \$10M for 1997
	• Technical Productivity Survey	Conducted in '96 and '97
	• Program Development/ Project Execution Process	PD/PE Improvement Committee active '95-'96; senior management Program/Line Committee studying improvements 1997

Strengths in Strategic Planning Category

LANL uses a linked Strategic Thinking Process (20year horizon) and Tactical Planning Process (3-year horizon), along with an annual five-year Institutional Plan

LANL's division and program offices have developed business/action plans linked to overall Laboratory direction

LANL has identified core skill competencies for mission accomplishment and is analyzing current and projected shortfalls

Strengths in Strategic Planning Category

Strategic Thinking/Tactical Planning

LANL applies scenario-based strategic thinking to gain a long-term perspective (15-20 years) for the institution. The scenario-based process creates a vision, mission, and institutional strategies and guiding principles. In turn, these directly guide the definition of other institutional planning efforts (e.g., environment, safety, and health; facilities; and diversity) and the institutional tactical plan. The tactical plan is the action plan for the next one to three years—the short-term institutional events on the critical path leading to LANL's vision and preferred destination. Tactical goals include goal champions, tactics, measures, and targets. As a mid-range projection, LANL annually produces the Institutional Plan, which summarizes the Laboratory's plans for the next five-year period.

Division-Level Plans

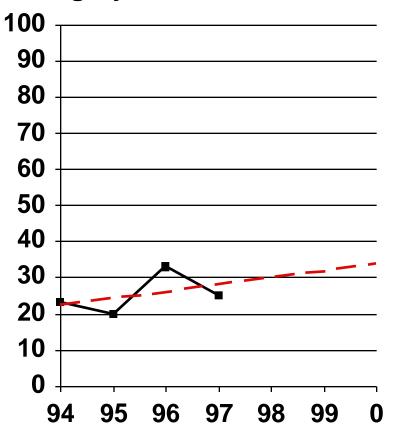
In 1996 LANL began deploying its Strategic Thinking/Tactical Planning Process to divisions and program offices. For 1997, all but one of these offices had developed individual business/action plans. The continuing effort will be to ensure that the division-level plans are updated regularly and that they closely link to overall Laboratory strategies and goals.

Skill Needs Assessment

In FY97 LANL initiated a Laboratorywide task force to identify core skills necessary to accomplish our mission and to conduct an analysis of current and projected demographic shortfalls. The Laboratory has also established recruiting teams tied to target populations needed to support the strategic goals and core competencies. To further create a flexible and mobile workforce, LANL has chartered a task force to address, plan for, and implement career development, mentoring, and succession planning.

Scores, Trends, and Issues in Strategic Planning Category

Category Score & Trend Line



Recurring Issues

- Strategic and tactical plans not systematically integrated and translated to division-level plans (94-97)
- Plans and projected future performance not linked, especially in relation to key competitors and benchmarks (94-97)
- No systematic process to evaluate and improve planning activities and plan deployment (94-97)

Areas for Improvement in Strategic Planning Category

Plan Integration

LANL has not clearly identified any Laboratorywide business drivers for its operations. Also, the Strategic Thinking/Tactical Goals processes lack vital connections to tactical goal execution with LLC monitoring and management, to the Appendix F performance monitoring system, and to division-level operations. LANL's planning processes have not addressed customers by segment with their differing needs, nor by LANL product response. LANL attempted to focus on customer segments by creating program offices during the 1994 reorganization, but focus on customers outside DOE still appears weak.

Review of Competitors and Benchmarks

LANL does not have specific goals related to future performance other than in the area of cost savings. Specific targets, especially in relation to benchmarks or to competitors' anticipated performance, are also missing.

Tactical goals do provide some two- to five-year performance targets in areas selected for emphasis. They do

not, however, provide comprehensive targets for overall Laboratory performance. Systematic collection and use of customer requirements, benchmark data and competitor comparisons through a Laboratorywide program would assist in setting targets in the planning processes.

Systematic Improvement

LANL lacks a systematic process for evaluation and improvement of its various planning processes. The Tactical Goal Process was revised between 1995 and 1996, but it is not clear that changes were the result of a systematic process. The Strategic Thinking Process has only been used for one iteration of the *Strategic Overview*; no improvement mechanism has been identified. Moreover, the critical activity of translating strategic direction into action occurs at the division and team levels, and these levels of the process do not appear to be systematically evaluated.

1994-1997 Initiatives in Category 3: Customer and Market Focus

Priority Area	Initiative	Current Status
Identifying and listening to all our customer segments, applying what they say, and	Voice of the Customer Program	Used in '94, '95, and '97; deployment and customization ongoing
providing follow-up	Program Value and Growth	Used only in 1996
	• Web pages	PD/PE and specific program office information online in 1997
	Appendix F reviews	External review committees in place for all S&T use of committees expanding to support divisions; A&O reviews conducted annually
Establishing customer support processes and standards	• Program Development/ Project Execution Process	PD/PE Improvement Committee active '95-'96; senior management Program/Line Committee studying improvements in 1997

Strengths in Customer and Market Focus Category

LANL has clearly defined market segments based on funding

The Appendix F Process helps LANL clearly determine performance expectations and customer satisfaction from DOE and UC and provides competitive comparisons

LANL's Voice of the Customer Program, tailored for program/division use, helps LANL focus on customer requirements and relationships

Strengths in Customer and Market Focus Category (cont)

The Program Development/Project Execution Process provides ongoing customer contact

Web pages allow customers to have quick and easy access to program information

Strengths in Customer and Market Focus Category

Market Segments

LANL categorizes customers into three groups: 1) sponsors (such as DOE program offices) that commission the development of products, 2) users (such as DoD) that actually use LANL outputs, and 3) stakeholders (such as the US Congress) that have vested interest in LANL. Further, LANL has segmented its customers based on national funding priorities.

Appendix F

The Appendix F process helps LANL determine and meet customer requirements. LANL develops Appendix F performance objectives and measures in partnership with UC, DOE, LLNL, and LBNL. The process provides clear expectations, increases accountability, improves customer relations by addressing performance issues that concern the DOE, focuses Laboratory resources on key business processes, improves operational quality, and reduces external oversight by sharing performance results with LANL customers.

Voice of the Customer

LANL's Voice of the Customer Program provides an overarching framework for identifying customer requirements. The objectives of VOC are to

- build customer relationships,
- identify LANL strengths from the customers' view,
- identify customer needs and concerns,
- assess the level of customer satisfaction,
- identify key areas for improving customer satisfaction, and
- further develop, test, and improve the process.

Use of VOC assures a proper alignment and balance of all activities needed to provide the greatest customer satisfaction and to help focus on and align with primary customers.

Program Development/Project Execution

LANL's PD/PE Process provides a formalized method for addressing customer communication needs throughout the life cycle of a project from product design through product

Strengths in Customer and Market Focus Category (cont)

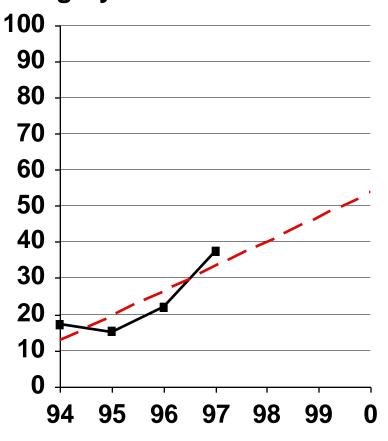
delivery. Program directors or program managers are primarily responsible for customer interactions, including gathering customer contact requirements and following up on customer satisfaction issues.

Web Pages

Taking advantage of new technology, LANL has coordinated a series of publicly accessible World Wide Web pages linked to the LANL home page (http://www.lanl.gov). The pages provide detailed information about all LANL program offices. The Web site includes program descriptions and program manager contact information including addresses and telephone numbers, details about the PD/PE Process and activities, and names of contact persons to answer questions or complaints.

Scores, Trends, and Issues in Customer and Market Focus Category

Category Score & Trend Line



Recurring Issues

- Limited ability to systematically gather, analyze, integrate, and use customer information (94-97)
- ●No systematic management of customer relationships (94-97)
- No systematic process to manage customer complaints (94-97)
- ●No process for improving customer-related processes (94-97)

Areas for Improvement in Customer and Market Focus Category

Gathering and Use of Customer Information

Although the Voice of the Customer and Program Development/Project Execution processes gather customer feedback, including future customer requirements, LANL does not have a systematic process for integrating this feedback with other factors such as scientific trends and geopolitical factors. LANL's Strategic Thinking Process does assess alternative futures for the Laboratory and possible customer requirements, but this process has been used for only one cycle. It is not clear how the ongoing dialogue between LANL program directors and customers is aggregated at the institutional level and used to address rapid, short-term changes in customer expectations.

Management of Customer Relationships

LANL tends to focus on the DOE customer and does not systematically follow up with all customers on products, services, or recent transactions. Determination of overall customer satisfaction is limited to the annual DOE/UC Appendix F assessment and to the annual roll-up of feedback from the Voice of the Customer Program. Responsibility for managing customer interactions is divided—e.g., among the

program offices, Appendix F administrators, and project implementation teams. An overall approach and responsibility are missing.

Customer Complaints

A few LANL divisions and programs have implemented specific methods for receiving, tracking, resolving, and learning from customer complaints. These approaches are not linked, however, and common customer issues and concerns are not shared across functional and operational boundaries. Moreover, LANL does not have a systematic complaint management process that aggregates and analyzes complaint data for use throughout the entire institution.

<u>Improvement of Customer-Related Processes</u>

Overall, LANL does not appear to systematically employ lessons learned in its customer processes and build upon past experience. LANL does not have a documented process to systematically evaluate and improve its Voice of the Customer Process. The effect of implemented changes is not systematically evaluated and the overall effect of the processes has not been measured.

1994-1997 Initiatives in Category 4: Information & Analysis

Priority Area	Initiative	Current Status
Establishing and using key customer-focused and process-focused measures	• UC Contract Performance (Appendix F)	Measures negotiated, used, and improved & performance analyzed in '94, '95, '96, '97
and targets	Workforce Productivity Project	Baseline for indirect funding and ratio of S&T to support personnel established 1996; work ongoing
	• Voice of the Customer	Used in '94, '95, '97; customization and revision ongoing
	• Tactical Goals Process	Tactical goals and related measures established for FY95 and FY96-98
	• Program Development/ Project Execution Process	PD/PE Improvement Committee active '95-'96; senior management Program/Line Committee studying improvements in 1997

1994-1997 Initiatives in Category 4: Information & Analysis (cont)

Priority Area	Initiative	Current Status
Identifying and using a suitable and effective information and analysis framework	•Information Architecture Project	Desktop standards established; Laboratory Corporate Information Directory in pilot phase; Data Warehouse established as part of Enterprise Information Systems; work ongoing
Establishing and deploying a Laboratorywide approach to systematic benchmarking and competitive comparisons	LANL Benchmarking InitiativeParticipation in DOE Quality Awards Program	Work in progress for 1998 Baldrige-based assessments and analysis conducted in '94, '95, '96, '97
Establishing and deploying a Laboratorywide approach to documenting and using lessons learned and success stories	•LANL Success Stories Initiative	Work in progress for 1998

Strengths in Information and Analysis Category

Electronic databases provide easy access to current data.

LANL senior leaders use tactical goals and Appendix F to identify/prioritize comparative data needs

Membership in professional benchmarking organizations helps LANL improve selection and use of comparative data

The LLC aggregates and reviews customer feedback and operational data for improvement

Strengths in Information and Analysis Category

Availability of Data

Extensive electronic databases provide access to current and reliable data (within the limitations of national security restrictions) for data owners, management, end users, and traditional users. These databases serve as the foundation for the process that allows all users of data rapid and easy access to the information they require. Examples of such databases include the following:

- Laboratory Scientific and Technical Information System,
- Laboratory Corporate Information Directory,
- Data Warehouse, and
- Nuclear Weapons Archival Project.

Selection of Comparative Data

Through Appendix F, LANL senior leaders specify the scientific and operational areas of greatest importance for comparative data. At the institutional level, the Appendix F Process provides LANL with a systematic approach to gain both comparative and benchmark information. The Tactical Goal Process also helps LANL determine where to focus and prioritizes the need for comparative information.

Benchmarking

Comparison of both scientific/technical efforts and administration/operations against LLNL and LBNL through the trilaboratory rating conducted by the UC and the DOE provides an informal method of benchmarking some products and services. For three years LANL has also maintained membership in the American Productivity and Quality Center/International Benchmarking Clearinghouse and The Benchmarking Clearinghouse. These two professional benchmarking organizations provide guidance in the effective use and evaluation of comparative data, including making available training in benchmarking philosophy and methodology. They also provide results of previous benchmarking activities and offer participation in collaborative studies.

LLC Aggregates Customer/Operational Data

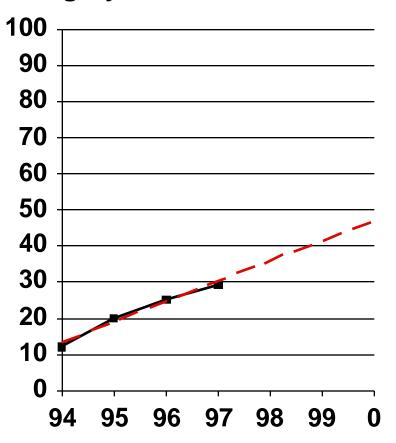
LANL's program offices, which track the Laboratory's alignment with DOE core businesses and interact directly with customers, employ the Voice of the Customer process—a formalized processes for the analysis and systematic use of

Strengths in Information and Analysis Category (cont)

customer feedback. Operational data comes from a variety of sources, including the Appendix F process, review of tactical goals, and the annual Employee Perspective/ Checkpoint Survey. The LLC's working groups are the forum in which these data are aggregated. In 1997 LANL began its fourth annual cycle of information aggregation, analysis, and use.

Scores, Trends, and Issues in Information and Analysis Category

Category Score & Trend Line



Recurring Issues

- No apparent coordination between tactical goals and Appendix F (96-97)
- Systematic approach to data selection and management is missing (94-97)
- Systematic approach to collection and use of benchmark data not used (94-97)
- Integrated approach to use and analysis of data missing (94-97)

Areas for Improvement in Information and Analysis Category

Coordination/Duplication of Data

Although LANL collects data relative to Appendix F and tactical goals, it is not clear whether this information is complementary or duplicative. The two systems, as well as other key information-gathering processes, operate independently with little coordination. Without a carefully defined connection between these systems, LANL leadership and other data users are provided with only fragments of information, not a comprehensive, coordinated data information system.

Data Selection and Management

LANL lacks a fully developed and deployed data system that supports uniform and systematic LLC management processes and improvement efforts. Information that is selected frequently lacks integration with other data, thus providing a fragmentary view. For example, LANL has no systematic method to integrate information related to its central mission; key customer groups and suppliers; technical competencies; major products and services; and key production, delivery, and support processes. Further, some data appears useful at the LLC level but is less functional at the division level.

Benchmarking

Although LANL has conducted some benchmarking, there is no systematic institutional process to identify benchmarking needs, select organizations to benchmark, and use the results for planning and improvement. Further, there is no activity that systematically assures the use of benchmarking for top-priority LANL programs.

Systematic Use and Analysis of Data

LANL does not have an overall process and plan for a data analysis system. Although the LLC *reviews* data, it does not appear to systematically *analyze* it for use in planning and improvement. Data is frequently used exclusively within programs or divisions, and cross-division trends, patterns, and relationships are not observed. Without systematic analysis, specific indicators cannot be tied to results and dynamic relationships become confused.

1994-1997 Initiatives in Category 5: Human Resources Development & Management

Priority Area	Initiative	Current Status
Increasing the flexibility of our work force and ensuring	Resilient Workforce	Division Training Generalists deployed 1994
that we have an excellent workforce		Workforce Resilience Team chartered; work ongoing
		Planning for career develop- ment, mentoring, and suc- cession planning begun 1996
		Skill identification and needs analysis begun 1997
		Training Intergration Office established 1997
	Strategic HR Planning	HR strategic plan developed 1995
	• Self-directed work teams	Piloted in ESA Division 1994- 1997; evaluated in 1997 with mixed results
	Performance Management Program	Piloted, revised in '94, '95; 30% deployed in 1996; 60% deployed in 1997

1994-1997 Initiatives in Category 5: Human Resources Development & Management (cont)

Priority Area	Initiative	Current Status
Ensuring that all employee groups have opportunities to participate in relevent decisions	• FY95 Tactical Goal 10 (Diversity)	LANL Diversity Office established 1995
		Diversity Strategic Plan developed October 1995
	Improving communication	Employee suggestion system (future@lanl.gov) implemented in 1995
Ensuring that all employees are safe and have access to	• FY96-98 Tactical Goal 1 (safety)	Integrated Safety Management begun in 1996
adequate services and support	Employee advocacy	Ombudsperson Office established in 1996
	Employee recognition	Los Alamos Awards Program begun in 1995, extended in 1997

Strengths in Human Resources Category

LANL uses a variety of methods to promote communication and learning

LANL effectively uses teams, both to perform work and to improve processes

Employee training aligns with institutional strategies and goals

LANL gathers and acts on employee concerns

LANL is taking steps to make the workplace safer for employees

LANL provides numerous employee support services

Strengths in Human Resources Category

Communication and Learning

A variety of tools promote communication and learning within LANL. LABNET transmits the Laboratory Director's colloquia and other lectures and presentations. The electronic *Daily Newsbulletin* keeps employees informed of Laboratory events. The Strategic Overview and Tactical Plan are distributed to all employees. Operational information—including results from annual Baldrige-based self-assessments and current LANL performance against Appendix F criteria—is readily available online to all employees, and the LANL world wide web pages contain a wealth of other programmatic and operational data. A widely deployed electronic mail system includes *future@lanl.gov*, LANL's online employee suggestion box.

Teaming

Numerous employees participate in process-improvement or problem-solving teams either within their own organizations or on cross-functional teams. LANL has developed a guide for all levels of employees to determine key issues of readiness and initial implementation for a wide variety of teams. The guide offers employees a readiness checklist and examines both barriers and incentives to teaming.

Since 1994, ESA Division has piloted the concept of self-directed work teams. A review in 1997 showed that the results were mixed, with some extremely encouraging successes as well as some disappointing failures. One of the key lessons learned is that successes do not come for free; self-directed teams actually required more management attention at the outset. LANL will continue to support efforts to set up self-directed work teams. Pockets of such teams are growing throughout the Lab in ESA, CIC, and BUS divisions.

Training Alignment

The Training Integration Office coordinates LANL's training program in accordance with strategic and tactical goals. At the division/program level, Division Training Generalists (DTGs) provide coordination for the training needs in each LANL division. The DTG Program allows each organization, in addition to aligning training with the overall LANL Tactical Plan, to provide site- or task-specific training to improve employee skills in key LANL processes or to

Strengths in Human Resources Category (cont)

address compliance issues. Annual employee performance appraisals, conducted as part of the Performance Management Program, require supervisors and employees to discuss required training and mutually establish a development plan that aligns employee development with both the organization's specific plans and needs and with LANL's overall goals and direction.

Employee Concerns

The LLC annually reviews data from the Employee Perspective/Checkpoint Survey and the Upward Appraisal Program and develops improvement goals and initiates action teams as necessary. The Employee Perspective/Checkpoint Survey contains both standard types of questions regarding factors affecting workforce climate and questions related to factors specifically related to LANL issues. The use of the standard questions allows LANL to perform comparisons with other companies to more accurately assess trends in employee responses.

Safety

LANL monitors all OSHA-mandated requirements and the environment, safety, and health performance measures

contained in Appendix F. Institutional safety contractual work standards and performance requirements are identified through DOE's Work Smart Standards process. In 1996 LANL launched a new program, Integrated Safety Management, to integrate safety management throughout all LANL work practices.

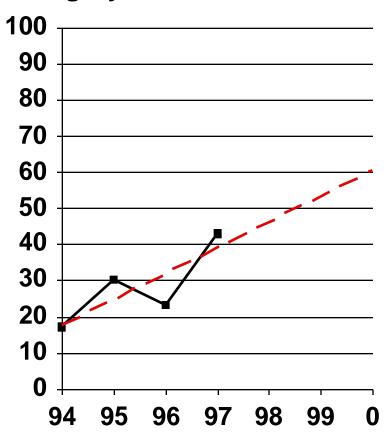
Employee Support Services

LANL employees can participate in a comprehensive set of support initiatives designed to improve both emotional and physical well-being. Examples of such services include the following:

- Employee Assistance Program;
- Wellness Center:
- flexible work schedules:
- HIV/AIDS awareness:
- specially designated recognition days, weeks, and months;
- administrative reviews and grievance procedures;
- · Ombuds Office; and
- Mediation Center.

Scores, Trends, and Issues in Human Resources Category

Category Score & Trend Line



Recurring Issues

- Systematic tie between performance & rewards missing (94-97)
- Reward systems not measured or evaluated (94-97)
- No systematic sharing of team learning (96-97)
- Training needs not prioritized & tied to key objectives (94-97)
- No systematic approach to evaluating and improving training (94-97)
- Employee support efforts not measured and prioritized (94-97)

Areas for Improvement in Human Resources Category

Rewards Tied to Performance

Although numerous initiatives exist, LANL does not systematically use compensation, recognition, or benefits to reward fulfillment of Laboratory tactical goals. The purpose of and criteria for the Los Alamos Awards Program are not clearly communicated, and the Performance Management Process is in place for only two-thirds of LANL employees.

Evaluation of Reward Systems

LANL does not appear to have a systematic process for evaluating and improving reward and recognition processes. For example, there is no clear attempt to balance individual and team performance compensation or recognition incentives. Although LANL now uses a combination of established and relatively new forms of recognition, it is not clear that any are routinely evaluated for effectiveness or adequacy in helping the institution achieve performance objectives.

Team Learning

Although teaming is LANL's strategy for more effective, flexible, and rapid work accomplishment, there is no

systematic, integrated approach to the evaluation, sharing, and use of lessons learned by these teams. Moreover, the use of problem-solving or process-improvement teams is not fully deployed across the institution, and the implementation of self-directed work teams is in the very early stages of deployment.

Prioritized Training

It is not evident how training needs are prioritized and addressed at either the institutional level or the division level. For example, LANL has indicated a desire to move toward team-based performance, but there is no clear vehicle for institutionally prioritizing this preference and translating it into actionable training for individual employees. Further, there is little systematic training to enable employees to demonstrate initiative, flexibility, and effective teaming, especially across work units. Although LANL has implemented a process for performing a skill needs assessment, the effectiveness of this approach for strategically positioning the LANL workforce has not yet been demonstrated.

Areas for Improvement in Human Resources Category (cont)

Evaluation of Training

LANL does not employ a systematic approach to evaluating and improving training efforts against LANL performance objectives and employee development objectives. Although the effectiveness of training tied to regulatory or certification requirements is evident in the short term, LANL has few methods of evaluating the long-term effectiveness of training.

Evaluation of Employee Support Efforts

Although LANL gathers data on employee morale and well-being through the Employee Perspective/Checkpoint
Survey, the generalized questions fail to provide information about the adequacy of or satisfaction with specific employee support efforts. LANL appears to lack any other systematic method for collecting and acting on such information. In addition, LANL employs many different categories of workers, yet the institution makes no effort to systematically identify differing support requirements for these various groups or to customize support efforts.

1994-1997 Initiatives in Category 6: Process Management

Priority Area	Initiative	Current Status
Implementing a consistent system for developing and executing programs	Program Development/ Program Execution Process	PD/PE Improvement Committee active '95-'96; senior management Program/Line Committee identified improvement areas in 1997
		PD/PE information online in 1997
Integrating operational	• Facility Management Model	Fully deployed
management for full compliance	• FY96-98 Tactical Goal 1 (Safety First)	Goal being deployed and tracked by LLC
	• Appendix F	Appendix F Process Improvement Team completed work in 1997
		Selection process for Critical Few Measures implemented in 1997

1994-1997 Initiatives in Category 6: Process Management (cont)

Priority Area	Initiative	Current Status
Establishing systematic approaches for design and control of production,	•Integrated Standards- Based Management	ISBM adopted by DOE in January 1996; LANL deployment continuing
delivery, and support processes	•Indirect Products/Services Survey	Indirect products/services evaluated against four key criteria in 1996
Implementing a systematic approach to process improvement	•Deployment of LANL seven-step methodology	Adopted by LLC in August 1996; information available online in 1997
	•Smooth implementation of improvements to crossfunctional processes	Quality Checklist for Improved or Reengineered Processes adopted by RWG and available online in 1997

1994-1997 Initiatives in Category 6: Process Management (cont)

Priority Area	Initiative	Current Status
Improving the product design process	• Product Realization (Concurrent Engineering)	Used extensively within the weapons programs '95-'97
	Benchmarking and competitive comparisions	Participation in American Productivity and Quality Center '95-'97
		Participation in DOE Quality Awards Program '95-'97
		Participation in Quality New Mexico Awards Program '95-'97
Improving customer interactions and the translation of customer	• Redesign of customer interface for weapons quality programs	completed in 1996
requirements into product requirements	Voice of the Customer	Used in '94, '95, '97; customization and revision ongoing

Strengths in Process Management Category

LANL uses a systematic method for product/service design and development, the Program Development/Project Execution Process

Key support processes and associated performance requirements are clearly identified

LANL objectively selects both critical subcontractors and other suppliers, establishes performance requirements, and manages supplier performance

Strengths in Process Management Category

PD/PE Process

The Program Development Process allows new research products to be proposed, fleshed-out, evaluated, and ultimately sold to an external sponsor in a systematic, highly structured manner. Through customer interactions coordinated by program offices, LANL identifies future opportunities aligned with its strategic direction and proposes solutions based on existing LANL capabilities to solve key customer problems. The Laboratory then provides discretionary investment for exploratory research, which, if successful, leads to program development in concert with customer funding. If the program is significant enough, it may also be incorporated into Laboratory tactical goals.

The Program Execution Process is also highly structured. LANL initially negotiates with customers to determine program specifications, scope, schedule, and cost. Ongoing execution review ensures that the program is effectively carried out, and continual communication between LANL and the customer ensures that expectations are met.

Both Program Development and Project Execution processes assign clear roles and responsibility. Detailed PD/PE information is available to all employees on the web.

Support Process Identification

LANL has identified key support processes and performance requirements necessary to undergird the PD/PE processes. In addition to the performance requirements identified for support processes through Appendix F, LANL has this year identified a subset of measures, the "critical few," for several support areas. This focus on critical measures allows LANL to not only measure past performance but to focus on current and projected performance to ensure that goals will be met.

Supplier/Partner Selection and Management

LANL selects its two critical subcontractors, as well as justin-time and basic-order-agreement suppliers, through a competitive bid process and a comparative analysis that assesses performance in key areas. Quality and performance

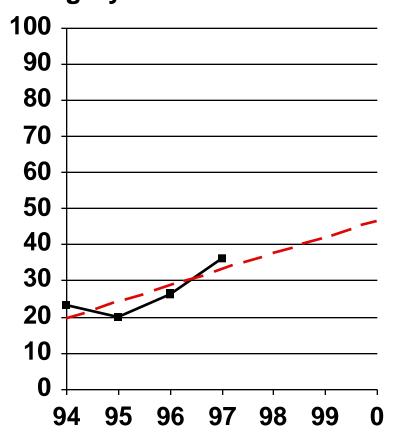
Strengths in Process Management Category (cont)

requirements for all suppliers are included in the statement of work or specified in each contract.

A formal biannual evaluation process for Johnson Controls Northern New Mexico and Protective Technologies Los Alamos reviews subcontractor performance using measures and goals and provides feedback. LANL also provides feedback on nonconformances to JIT and BOA contractors and works cooperatively to ensure supplier performance meets contractual requirements.

Scores, Trends, and Issues in Process Management Category

Category Score & Trend Line



Recurring Issues

- No systematic process to improve product/service design (94-97)
- ●No systematic management of PD/PE (94-97)
- No consistency across projects or systematic learning (96-97)
- ●No systematic process to evaluate/maintain/improve support processes (94-97)

Areas for Improvement in Process Management Category

Product/Service Design Improvement

The Program Development/Project Execution Process does not have clear entry/exit criteria as designs move from one activity to another, and—except for use of concurrent engineering in some program areas or repeated checks with customers—LANL does not have a uniform process to assure the thoroughness of design requirements or to systematically monitor requirements to ensure designs meets specified customer expectations.

PD/PE Management

Although LANL has established a PD/PE Process, management of the process is not systematic and consistent. Metrics and standards to define successful projects are not uniformly in place. While efforts are under way to provide consistent guidance and tools for project teams, the guidance and tools are not fully developed and deployed. Lessons learned are not systematically collected and shared across the Laboratory. Key in-process metrics are not identified and tracked.

Systematic Learning

LANL does not systematically evaluate individual projects and use this evaluation to improve the overall process of project management. Many project teams—for example, those in the weapons arena—establish unique mechanisms to review and monitor product design; there is little consistency and little effort to share lessons learned across projects. This also applies to improvement efforts. The effectiveness of individual improvements is not evaluated and lessons learned are not shared.

Support Process Improvement

Although Appendix F measures are moving from outcomebased metrics to process-driven metrics, this transition is not complete. Appendix F, then, is insufficient to help managers manage on a day-to-day basis, and no other systematic, uniform process is in place. While Appendix F identifies nine key support areas, LANL has identified key support metrics (the "critical few") in only a few functional areas. Moreover, Appendix F is designed to serve the needs of sponsors and stakeholders (UC and DOE), so it is not clear

Areas for Improvement in Process Management Category (cont)

how Appendix F meets LANL's own support requirements or that any other method exists to systematically identify and manage those internal requirements.

Systematic criteria do not exist for designing, improving, or evaluating all of LANL's key support processes. Clear ownership of many key processes is missing, as is responsibility for process improvement. Finally, there is no uniform and systematic process for prioritizing improvement opportunities and for improving these systems.

1994-1997 Initiatives in Category 7: Business Results

Priority Area	Initiative	Current Status
Moving toward more systematic management by fact	• UC Contract Performance (Appendix F)	Measures negotiated, used, and improved & performance analyzed in '94, '95, '96, '97
	Voice of the Customer	Used in '94, '95, '97; customization and revision ongoing
	• Tactical Goals Process	Tactical goals and related measures established for FY95 and FY96-98
	• Employee Perspective/ Checkpoint Survey	Conducted in '94, '95, '96, '97
Reducing the cost of doing business; deciding what work we will not do	• Redesigned Indirect Budget Process using risk prioritization	Baseline for indirect funding established 1996; work ongoing
	Workforce Productivity Project	Projected \$60M savings annually starting in 1996; additional \$10M for 1997

1994-1997 Initiatives in Category 7: Business Results (cont)

Priority Area	Initiative	Current Status
Learning how well LANL performs relative to best-in-	• LANL Benchmarking Initiative	Work in progress for 1998
class and competitors	Participation in DOE Quality Awards Program	Baldrige-based assessments and analysis conducted in '94, '95, '96, '97

Strengths in Business Results Category

LANL's technical ability is "excellent" or "outstanding"

LANL's administrative and operational performance shows generally improving trends

LANL's general support costs compare favorably with other institutions, and funding is gradually being shifted from support to science and technology

Some employee satisfaction results show positive trends

Strengths in Business Results Category (cont)

Subcontractor/supplier performance shows generally favorable results

Tactical goals are well deployed throughout the Laboratory

Strengths in Business Results Category

Excellent/Outstanding Technical Ratings

The quality of LANL's science and technology provides the foundation of the Laboratory's ability to deliver products and services to customers. A major component of assessing the quality of our science and technology is predicated on peer review. LANL has completed four cycles of this process. Scores for most of the divisional evaluations improved between 1994 and 1995, and in 1996 evaluation results for all technical divisions were "Excellent" or "Outstanding." In addition to the Appendix F peer-based evaluations, LANL judges its technical expertise on such measures as number of publications, R&D100 awards, and inventions/patents. These all show generally improving trends, and in many cases show that LANL outperforms its competitors.

Administration and Operations Ratings

LANL's performance in the areas of administration and operations has shown gradual improvement since 1993. These improvements clearly manifest the intent of LANL management to dedicate time and resources to meet, exceed, and in some cases far exceed DOE's expectations in the ten

A&O functional areas. Three functional areas—property management, safeguards and security, and financial management—demonstrate most notable success.

Cost Reductions

LANL launched its Workforce Productivity Project in July 1995 to look first at the cost of administrative and operational costs in proportion to programmatic resources. A key goal was to take some of the unproductive, bureaucratic work out of the system and to reduce overhead. Related annual savings beginning in FY96 were more than \$60M. In addition to outright cost savings, LANL is also directing more of its funding to science and technology. The percentage of funding for S&T work has increased from 56% in FY94 to 60% in FY96, with a corresponding decrease in spending for support functions.

Employee Satisfaction

Starting in 1994, LANL has been annually measuring employee satisfaction through the Employee Perspective/

Strengths in Business Results Category (cont)

Checkpoint Survey. Through 1997, 42% of the specific measures have shown positive trends. Major sources of positive change, as measured on the survey, are in the areas of communication and management.

Subcontractor/Supplier Performance

Measurement of the performance of LANL's two critical suppliers, Johnson Controls Northern New Mexico and Protection Technologies Los Alamos, show positive overall long-term improvement. LANL's management system for these partners is a mature process that has undergone many improvements. Performance results for all contractors, including just-in-time and basic-order-agreement suppliers, also show generally favorable results.

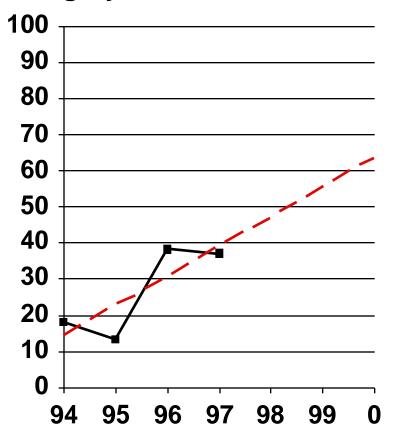
Tactical Goal Deployment

Since development of the FY95 Tactical Goals, LANL's process for deploying the tactical goals to all levels of the institution has matured. Using a cascaded planning process, in 1997 LANL achieved a deployment rate of 96% for tactical goals and associated action plans. This wide

deployment helps ensure that division/program office goals align with institutional plans and that every employee has a clear line of sight to LANL's key objectives.

Scores, Trends, and Issues in Business Results Category

Category Score & Trend Line



Recurring Issues

- Competitor comparisons and benchmark data not used (94-97)
- Project results not used to manage/improve (96-97)
- Human resource results show modest or little improvement (96-97)

Areas for Improvement in Business Results Category

Benchmark and Competitor Data

Although LANL divisions use benchmarking when they believe it is useful to them, there is no systematic process to identify benchmarking needs, select organizations to benchmark, and use the results. LANL does not appear to analyze comparative information, available through Appendix F evaluations for all three UC-managed laboratories, and determine causes for changes in ratings. No comparative data is sought or analyzed to determine performance of similar key suppliers at other facilities. Use of benchmarking data from organizations outside the DOE complex is extremely limited, and few comparisons are made or projected against best-in-class companies.

Project Results

Although LANL tracks high-level results for science and technology through such things as peer review of divisions and R&D 100 Awards, management does not assess projects by the results achieved and use that information to improve future projects. There is little sharing of lessons learned, either among line divisions or across program offices.

Human Resources Results

Excluding results from the annual Employee Perspective/ Checkpoint Survey and FY96-98 Tactical Goal 1 (Embrace Diversity), LANL has not identified key measures related to human resources and does not appear to institutionally track results from those measures. For those results that are collected, goals are generally not established. LANL appears to perform little comparative analysis against relevant benchmark data, and results are generally not trended to reveal patterns or emerging concerns. Although some HR results data show improvement, some show negative trends or pockets for concern and possible corrective action. Results from the annual employee survey show that between 1994 and 1997 9% of the measures had negative trends and 49% had no trends and, hence, no improvement.

Next Steps 4

About This Section

How should LANL respond to the issues raised by the Baldrige assessments and documented in Section 3? What activities will systematically raise the level of quality and increase the rate of improvement across the entire organization?

During the past two years the LLC has launched several initiatives. Some presented immediate results, while for others the effects are just now starting to appear. Section 4 suggests that the Laboratory remain steadfast with these initiatives until they are fully deployed and providing trendable results.

While it is obvious that LANL requires significant and sustained improvement in all categories, the 1997 Baldrige assessment has pointed out several specific areas in which the Laboratory can build on existing initiatives or use new efforts in key activities to leverage success. Section 4 includes recommendations to address those areas.

LANL must deal with some key issues

Priority Areas for Improvement

For the 1995, 1996, and 1997 assessments, independent external evaluators recorded numerous recurring areas requiring significant improvement. Areas requiring significant improvement are those that seriously impact an organization's ability to function effectively. Although our 1997 evaluation continued to show slow but steady overall improvement, there are several areas—identified repeatedly during the past four evaluations—in which the Laboratory needs to make significant improvement. Those priority areas include the following.

- Leadership system. The appointment of a new Laboratory Director and resulting changes in senior management structure and style will have significant impact on this area. Throughout the transition and beyond, we must clarify and clearly communicate the leadership structure and decision-making authority of the Laboratory. LANL must also ensure an integrated and coherent framework that allows consistent and adequate direction setting and performance monitoring across the entire Laboratory. Senior leaders must continue to be highly visible in communicating and reinforcing Laboratory goals and values.
- Strategic planning and operating systems. Although we have improved our planning process, we must continue to closely monitor the tactical goals and related measures and ensure that division plans fully reflect higher-level institutional goals. We must also strive to make the planning process systematic and to regularly communicate progress and results. Two other key operational processes, our Voice of the Customer process and our Program Development/Project Execution process, must be more systematic, controlled, and evaluated. Although we are attempting to improve these processes, we still have much work to do.
- Information and analysis. This is a recurring improvement area. We must find ways to identify key management information; more effectively integrate that information; and provide timely, effective analysis. We must structure our data to support uniform and systematic management processes and improvement efforts. In short, we must begin to more effectively use data to manage our business.
- Results. In addition to developing and using measures more effectively, we must better align our measures with our mission and goals. We must learn to analyze results to identify emerging trends so that the data allow us to manage

LANL must deal with some key issues (cont)

proactively rather than reactively. We must also systematically identify best-in-class or world-class goals and then ensure that the measures we track and the results we trend move us in the right direction.

Possible Approaches

LANL already has in place several initiatives that address these cross-cutting issues. The deployment of these existing approaches, coupled with the implementation of other carefully selected activities, can provide improvement across a broad range of issues. The following pages identify in more detail existing or potential 1998 initiatives.

Priority Area	Existing/Potential Initiative	Baldrige Category	Status	Owner
Leadership System	 Clarify leadership structure and decision-making authority within the LLC. 	1	in progress	Director & LLC
	 Complete integration and deployment of key management processes (e.g., coordinate Appendix F measures and tactical goal targets). 	1, 2, 4, 7	in progress	LLC & QP
	 Through Accountability Score- cards, encourage senior leaders to be personally responsible and highly visible in communicating Laboratory goals and values. 	1	ongoing	Director
	 Expand LANL regional involvement and demonstrate corporate good citizenship. 	1, 4, 7	in progress	LLC, CIO, & QP

Clarify Leadership Structure/Authority

In the past, LLC decision-making authority and responsibility among the Laboratory Director, the Executive Team, the LLC as a whole, and various working groups has at times been cumbersome and unclear. The LLC's Institutional Issues Resolution Process now provides clearer definition of responsibilities. However, as the new Laboratory Director establishes his management structure, it is imperative that responsibilities continue to remain clearly defined and that they be clearly communicated.

Deploy/Integrate Key Management Processes

Although the LLC evaluates input from many sources, two key systems provide mechanisms for Laboratorywide direction setting—the strategic thinking and tactical planning processes and the Appendix F measures and results. Senior leaders must address several issues, however, before the systems can deliver optimum synergistic benefits.

 Both systems must be fully deployed to the entire Laboratory. Although tactical planning is almost fully

- deployed, division/program office tactical plans must be more tightly aligned with LANL plans and goals.
- Both systems need to be more fully integrated. Currently
 Appendix F appears to be used to provide information to
 sponsors and tactical goals provide information to the LLC.
- The systems need to be structured so that they provide useful management information not only for the Laboratory as a whole but for the divisions and program offices as well.

Senior Leader Personal Accountability

Annual Accountability Scorecards serve as the performance appraisal system for senior leaders. It is essential that the Laboratory Directory continue to encourage LLC members to be personally accountable for communicating and reinforcing Laboratory goals and values. It is equally important that senior leaders personally model the type of Laboratory good citizenship expected of all employees.

Corporate Citizenship

Corporate good citizenship and promotion of regional economic development are ongoing LANL thrusts, strongly

encouraged by the special provisions of the new UC management contract. Although LANL has made significant improvements in this area, it is essential that progress continue, that new initiatives be launched, and that those undertakings already in progress be seen to successful completion.

Priority Area	Existing/Potential Initiative	Baldrige Sections	Status	Owner
Strategic Planning & Operating Systems	• Implement a more systematic and integrated process for developing and deploying institutional plans. Ensure that the planning process is fully integrated with all major Laboratory measurement systems.	2, 3, 4, 5, 7	not started	LLC & QP
	• Establish at the Laboratory level a systematic approach to customer issues. Assign Laboratorywide responsibility for deploying and monitoring the approach across all segments of the organization.	2, 3, 5, 6, 7	not started	LLC

Priority Area	Existing/Potential Initiative	Baldrige Sections	Status	Owner
Strategic Planning & Operating Systems	 Continue improvement and deployment of Program Development/Project Execution Process. 	2, 3, 4, 5, 6, 7	under way	Program/ Line Committee

Plan Systematically and Integrate

LANL has completed only one iteration of the Strategic Thinking Process and two iterations of the Tactical Planning Process. Although the results are commendable and valuable, the process itself is not highly structured and defined. Schedules and cycle times for the process itself need to be determined, and key process responsibilities need to be assigned. It is also essential that institutional planning processes fully interface with all key measurement and information-gathering processes (Appendix F, Performance Management, Employee Perspective Checkpoint Survey/ Upward Appraisals) to avoid duplication of effort and to ensure that key data is analyzed and used to set directions. Although 96% of LANL program and division offices have also developed business plans, a stronger effort is required to ensure that these plans fully align with institutional plans.

Deploy High-Level Systematic Approach to Customer Issues

LANL established program offices to deal with customer segments, and the LLC reviews customer feedback annually.

A systematic Laboratorywide approach to customer issues, however, is missing. An initiative to create such an approach and to assign responsibility for its implementation would provide a uniform and more integrated method for dealing with the following customer issues:

- ensuring that customer issues are fully addressed in all LANL planning activities,
- ensuring a consistent methodology for collecting and tracking customer requirements and ensuring they are met, and
- establishing a uniform approach for handling customer interactions, including collecting and tracking customer complaints.

Improve/Further Deploy PD/PE

In 1997 the LLC began active involvement with the Program Development/Project Execution Process, giving this key process more initiative and higher visibility. The Program/Line Committee has identified major problems with the PD/PE Process and has identified the following critical areas to improve:

- joint planning,
- · management roles and responsibilities,
- project execution, and
- training.

This renewed emphasis must be continued to enable ongoing improvement of the PD/PE Process and wider deployment throughout the institution.

Priority Area	Existing/Potential Initiative	Baldrige Category	Status	Owner
Information and Analysis	 Establish a process to ensure that critical data are identified, fully analyzed, systematically reviewed, and available to management for decision making. 	1—7	in progress	LLC
	• Expand data analysis to more completely include Voice of the Customer information and data related to institutional processes and goals.	1, 3, 4, 6, 7	in progress	LLC & QP
	 Establish and deploy a Laboratorywide approach to documenting and using lessons learned and success stories 	1, 4, 6, 7	in progress	QP

Identify, Analyze, and Use Critical Data

The LLC reviews mountains of data. What is lacking is a systematic process for selecting data most critical to managing the Laboratory. The process for selecting the critical few measures related to Appendix F functional areas is a beginning step. It is important that this same sort of screening process be used to identify key measures from the rest of LANL's primary measurement systems. Ensuring that data is carefully analyzed and then making the right data available to the right manager in a timely manner is also critically important. The Information Architecture project is addressing the collection and storage of data, but there is currently no initiative to establish a system that can prioritize and integrate the data and then, through analysis, transform it into information suitable for use in decision making.

Integrate and Expand Data Analysis

Currently, feedback from the Voice of the Customer Program is held at the program/division level and not effectively aggregated at the institutional level. An annual roll-up of customer input from the VOC Program could provide valuable information for incorporation into Laboratory planning activities. For example, there are still critical gaps in linking some customer requirements (e.g., integration, focus, and partnering across the DOE Complex) to tactical goals and related measures.

In addition, LANL must integrate and more fully manage key measures and results for processes designed to meet customer requirements. For example, although the Program Development/Project Execution Process is central to LANL's operations, no key measures are identified or tracked for this process.

<u>Deploy Systematic "Lessons Learned" and "Success Stories" Programs</u>

Although LANL collects a great deal of data, such as information from customers and results of process management and improvement efforts, there is no systematic way to share information across projects or across organizations. The use of a structured program to gather and disseminate success stories and lessons learned would help to identify key techniques, avoid common pitfalls, and trend common measures.

Priority Area	Existing/Potential Initiative	Baldrige Sections	Status	Owner
Results Focus	• Identify track, and trend results from key Laboratory processes	1, 4, 6, 7	not started	LLC
	 Fully deploy a Laboratorywide, systematic approach to process management and improvement 	1, 4, 6, 7	ongoing	LLC
	 Establish and deploy a Laboratorywide approach to systematic benchmarking and competitive comparison. 	2, 4, 6, 7	in progress	QP

Identify and Trend Key Process Results

LANL has identified many key measures and related goals, but some key information systems have no associated critical measures and goals. For example, systems for interfacing directly with customers (e.g., gathering requirements, measuring satisfaction, and responding to complaints) have no associated institutional goals, and results are not systematically tracked. Similarly, there are no performance goals associated with systems such as the Employee Perspective/Checkpoint Survey. An initiative in this area will also strengthen deficiencies related to project management and will ultimately help LANL more effectively align with customer needs.

Systematically reviewing and trending results from key information-gathering systems will also allow LANL to evaluate performance over time. Identifying baseline performance will allow LANL to develop more realistic goals for future actions and more accurately project operational expectations. Finally, developing and using trend data more systematically will allow senior leaders to truly manage by fact rather than reacting to ungrounded perceptions or unique events.

Deploy Systematic Process Improvement

LANL has pockets of excellence in process management and process improvement, but a Laboratorywide approach and system are missing. The LLC has begun to track process improvements—especially operational improvements—and related results in a more systematic fashion and has adopted a formalized seven-step methodology for use by improvement teams chartered by the LLC. Expanding these initiatives to all portions of LANL would provide consistency in the type of results collected and tracked, would improve process performance across the organization, and would provide consistent and measurable results.

Deploy a Systematic Benchmarking Program

Although LANL has conducted some benchmarking, there is no systematic, Laboratorywide process to identify benchmarking needs, select organizations to benchmark, and use the results for planning and improvement. Further, there is no activity that systematically assures the collection and availability of collected benchmark data for Laboratorywide use or the use of

benchmarking for top-priority LANL programs. Establishing a systematic program would address items in the following Baldrige categories:

- the competitive environment related to planning in category 2.
- data collection and benchmarking in category 4,
- process efficiency addressed in category 6,
- comparative data for product and service quality results, operational and financial results, human resource results, and supplier comparisons in category 7, and
- evaluation of customers of competitors and competitors' customer satisfaction results in category 7.

Acknowledgments

The Players

LANL's ability to assess the status of its quality has rested largely on the efforts of numerous Laboratory employees who have assisted the effort above and beyond their normal duties. In 1994, nearly 100 LANL citizens participated in Baldrige training and then conducted an initial evaluation of the Laboratory. Working as three separate groups, the teams assessed our status against the Baldrige criteria and helped develop a baseline for future reference.

In 1995, the Laboratory participated in the inaugural DOE Quality Awards Program, a Baldrige-based assessment system for use within the DOE Complex. Thirty Laboratory employees helped draft the 30-page application for submittal in May, and an additional 23 employees participated in the associated site visit in August.

The Laboratory chose to participate in the DOE Quality Awards Program again 1996 and 1997 as part of its annual evaluation cycle. These application teams of approximately 35 members included representatives from DOE and UC and delegates from principal subcontractors JCI and PTLA. The 66-page applications closely

resembled full Baldrige applications. For each of the site visits, 40 to 50 Laboratory employees—including many members of the LLC—provided assistance.

A requirement for LANL participation in the DOE Quality Awards Program has been that the Laboratory provide examiners. In 1995 one Laboratory employee volunteered his services, received Baldrige training, and then served on a team that evaluated organizations across the DOE Complex. By 1997 the number of examiners from LANL has increased to eight.

In addition, since 1994 LANL has played a key supportive role with New Mexico's statewide quality effort. Several LANL organizations have independently submitted Baldrige-based assessments, and between 1994 and 1997 the Laboratory has contributed a total of 38 individuals to receive training and serve as examiners for the Quality New Mexico Awards Program. These individuals use their expertise to further promote excellence and fact-based improvement in their work at the Laboratory.

The Laboratory gratefully acknowledges the dedicated service and commitment of all the individuals associated with the Los Alamos quality journey.

Weapons Quality

Wartime Years

- Strong sense of mission, commitment, and ambition
- Effective program management
- Regular work assignments
- Program reviews by outside consultants

Postwar Years

- Management responsibility for quality control
 - * detailed specifications
 - * controlled manufacture
 - * controlled inspection
 - * built-in reliability
 - * controlled quality

Production Years

- Classical quality control copied from industry
- Production phased out to plants
- AEC given oversight responsibilities
- QC-1 issued in 1955
- Thousands of inspectors hired

Recent Years

- Well defined, phased weapons program
 - * conceptual design
 - * feasibility study
 - * engineering development
 - * production engineering
 - * retirement

- Enhanced tools
 - * program management
 - * computer modeling of weapons behavior
 - * above ground and underground experiments
 - * statistical design of experiments
 - * scientific method
- QC-2 issued in 1990
 - * quality management system
 - * customer focus
 - * project management
 - * process definition
 - * design control
 - * technical peer reviews
 - * metrics for continuous improvement

Quality Control/Quality Assurance

1991

- DOE Order 5700.6C, Quality Assurance, incorporated as a requirement in the UC Contract
- Directors Policy 110, Quality
- ASME NQA-1 Quality Assurance Requirements for Nuclear Facilities

1992

- PRD 110-01.0, LANL Quality Assurance Management Plan

1994

- 10 CFR 830.120, Quality Assurance for Nuclear Facilities

Other Relevant QC/QA Standards

- DOE/AL QC-1, Quality Criteria for nuclear weapons design and production (current revision)
- EPA regulations and standards governing quality program requirements for such things as ER activities, waste processing and handling, and environmental monitoring of operations (QAMS series)

Recent Quality History

1991-1994

- focus on <u>how</u> we perform our work
- revised Laboratory mission
- continuous quality improvement initiative
- performance-based UC contract
- revised Program Development/Project Execution Process
- Laboratory restructuring
- Laboratory Leadership Council takes quality training from Motorola and Milliken

1994-Present

- annual Appendix F performance assessment
- Voice of the Customer feedback
- Baldrige baseline and annual Baldrige-based assessment
- 1995 and 1996-1998 Tactical Plans
- Strategic Overview: 1996-2015
- annual Employee Perspective/Checkpoint Survey
- Upward Appraisal Program
- Diversity Strategic Plan

- Diversity Office
- Diversity Strategic Plan
- Human Resources Strategic Plan
- Community Involvement and Outreach Office
- Workforce Productivity Project
- Integrated Standards Based Management
- Integrated Safety Management
- Training Integration Office

Appendix B: Recent Awards Earned

• R&D 100 Awards

1993 4

1994 6

1995 6

1996 2

1997 6

DOE Quality Awards Program

1995 Energy Champion Award

1996 Accomplishment Award

Small Business Administration

1994 Eisenhower Award

Quality New Mexico

1995 Roadrunner Award (ESH-3, Facility Review Section)

1996 Roadrunner Award (Facilities, Security & Safeguards Division)

Appendix B: Recent Awards Earned (cont)

DOE/AL Team Quality Awards

Platinum Improvement in Public Outreach and Involvement

(1996)

Platinum Product Realization (1996)

Platinum ESH Performance Measures/UC Contract (LANL,

LLNL, **LBNL**) (1996)

Gold CQI Approach to Plutonium Operations at TA-55

(1996)

Gold National Pollutant Discharge Elimination System

Permit Compliance (1996)

Silver Project Management System (1996)

Appendix B: Recent Awards Earned (cont)

Silver Integrated Teaming Strategies for Safeguards and

Security Program Continuous Improvement (1996)

Silver High Explosive Wastewater Treatment Facility (1997)

Bronze LANL Waste Management Strategies (1997)

Bronze Atlas Project and Management System (1997)

Appendix B: Recent Awards Earned (cont)

- American Productivity and Quality Center Benchmarking Awards
 - Waste Disposal Process Study Team (1997)
- National Performance Review Hammer Awards
 - Enhanced Work Planning Initiative Team (1997)
 - Federal/Contractor Purchasing Council (1997)
 - Explorer Team (1997)